MARKS

7
(6, 1)

6. Suppose that 2% of all drivers on the road on Sundays are intoxicated, and that 97% of those who are intoxicated are detected by a breathalyzer test. Suppose also that, due to imperfections in the breathalyzer, 1% of drivers who are **not** intoxicated register as being intoxicated.

   (a) If a driver on a Sunday registers as being intoxicated on a breathalyzer test, find the probability the driver is **not** intoxicated.

   (b) What do you conclude from your probability in (a) about the reliability required in a test for a relatively rare but important condition? Explain briefly.

(a)

(a)
Probability

(b)